Material Safety Data Sheet

1. Product and Company Identification

Material name CH210A

Use of the preparation Inkjet printing.

Version # 01

Revision date 04-06-2009

CAS # Mixture

Synonym(s) ColorSpan 0900343-003

Company identification

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Date prepared Apr 06, 2009

MSDS number 379412

2. Hazards Identification

Acute health effects

Skin contact Contact with skin may result in irritation. Avoid contact with the skin.

Eye contact Contact with eyes may result in irritation. Avoid contact with eyes.

Inhalation Inhalation of vapor is not expected to be a primary route of exposure for this product under normal use conditions.

Ingestion Acute ingestion may result in mild gastrointestinal distress. May be harmful if swallowed.

Ethylene glycol
Harmful if swallowed. May cause kidney and liver damage. May depress the central nervous system.

Potential health effects

Routes of exposure Potential routes of overexposure to this product are skin and eye contact

3. Composition / Information on Ingredients

Component/substance	CAS number	% by weight
Ethylene glycol	107-21-1	<7
2-pentanol	6032-29-7	<3
2-Pyrrolidone	616-45-5	<3
Glycerol	56-81-5	<3
Propylene Glycol	57-55-6	<3
Diethanolamine	111-42-2	<1.5
Minor Ingredients		<2
Dyes	Proprietary	1-7
Water	7732-18-5	Balance

Composition comments This ink supply contains an aqueous ink formulation.

4. First Aid Measures

First aid procedures

Eye contact
In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops or persists.

Skin contact
In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water.
Wash clothing separately before reuse.

Inhalation
In case of accident by inhalation: remove casualty to fresh air and keep at rest. If symptoms persist, get medical attention.

Ingestion
Rinse mouth out with water. Give several glasses of water. Never give anything by mouth to an unconscious person. Do not induce vomiting.
If symptoms persist, get medical attention.

5. Fire Fighting Measures

Flash point and method
Not flammable

Hazardous combustion products
Decomposition of this product may yield oxides of sulfur and nitrogen.

Flammable properties
The product is not flammable.

Extinguishing media

Suitable extinguishing media
Use any media suitable for the surrounding fires.

Unusual fire and explosion hazard
The product is not flammable.

Protection of firefighters

Protective equipment and precautions for firefighters
Wear suitable protective equipment.

6. Accidental Release Measures

Personal precautions
Avoid contact with skin. Do not touch or walk through spilled material.
Use personal protective equipment to minimize exposure to skin and eye.

Environmental precautions
Do not flush into surface water or sanitary sewer system.

Methods for cleaning up
Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean up in accordance with all applicable regulations.
Clean-up methods - small spillage; Flush area with flooding quantities of water.

7. Handling and Storage

Handling
Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists of this product.
Use personal protective equipment as required. Use only with adequate ventilation. When using, do not eat, drink or smoke.

Storage
Keep tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Do not handle or store near an open flame, heat or other sources of ignition.
Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value	Form
Diethanolamine (111-42-2)	TWA	2 mg/m3	
Ethylene glycol (107-21-1)	TWA	100 mg/m3	Aerosol.
Glycerol (56-81-5)	TWA	10 mg/m3	Mist.

U.S. - OSHA

Components	Type	Value	Form
2-pentanol (6032-29-7)	PEL	100 ppm 360 mg/m3	
	STEL	125 ppm 450 mg/m3	
	TWA	360 mg/m3 100 ppm	
Diethanolamine (111-42-2)	TWA	3 ppm 15 mg/m3	
Ethylene glycol (107-21-1)	Ceiling	50 ppm 125 mg/m3	
Glycerol (56-81-5)	PEL	15 mg/m3 5 mg/m3	Total dust. Respirable fraction.
	TWA	10 mg/m3 5 mg/m3	Total dust. Respirable fraction.

Personal protective equipment

General	Eye wash fountain and emergency showers are recommended.
Eye / face protection	Wear safety glasses; chemical goggles (if splashing is possible).
Skin protection	Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves. If splashes are likely to occur, wear: Latex gloves. Rubber apron.
Respiratory protection	Provide adequate ventilation.
General hygeine considerations	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Launder contaminated clothing before reuse.

9. Physical & Chemical Properties

Color	Yellow
Odor threshold	Not available.
Physical state	Liquid.
Form	Aqueous solution.
pH	7 - 8
Melting point	< 32 °F (< 0 °C)
Freezing point	Not available.
Boiling point	> 212 °F (> 100 °C)
Flash point	Not flammable
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Relative density	1.03 g/cm³
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.

Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	87.6 g/L

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage conditions.
Conditions to avoid	Avoid high temperatures.
Incompatible materials	Strong oxidizing agents.

11. Toxicological Information

Sensitization

US ACGIH Threshold Limit Values: Skin designation

Diethanolamine (111-42-2)	Can be absorbed through the skin.

Local effects	Inhalation of vapors in high concentration may cause irritation of respiratory system.
Carcinogenicity	None of the ingredients have been classified as carcinogens according to EU, IARC, MAK, NTP, OSHA or ACGIH.

IARC Monographs on Occupational Exposures to Chemical Agents: Evidence of carcinogenicity in humans

Diethanolamine (111-42-2)	Inadequate data.

US ACGIH Threshold Limit Values: A4 carcinogen

Ethylene glycol (107-21-1)	Group A4 Not classifiable as a human carcinogen.

Symptoms and target organs

Target Organs (NIOSH)

2-pentanol (6032-29-7)	Central Nervous System
2-pentanol (6032-29-7)	Eyes
2-pentanol (6032-29-7)	Respiratory system
2-pentanol (6032-29-7)	Skin
Diethanolamine (111-42-2)	Eyes
Diethanolamine (111-42-2)	Respiratory system
Diethanolamine (111-42-2)	Skin
Ethylene glycol (107-21-1)	Central Nervous System
Ethylene glycol (107-21-1)	Eyes
Ethylene glycol (107-21-1)	Respiratory system
Ethylene glycol (107-21-1)	Skin
Glycerol (56-81-5)	Eyes
Glycerol (56-81-5)	Kidneys
Glycerol (56-81-5)	Respiratory system
Glycerol (56-81-5)	Skin

12. Ecological Information

Ecotoxicity	Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Dispose of in compliance with federal, state, and local regulations. Do not allow this material to drain into sewers/water supplies.

14. Transport Information

IATA

Not regulated as dangerous goods.

General	Not a regulated article under United States DOT, IATA, ADR, IMDG, or RID.

15. Regulatory Information

US federal regulations

US EPA TSCA Inventory: All chemical substances in this product comply with all rules or orders under TSCA.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Diethanolamine (111-42-2)	1.0 %
Ethylene glycol (107-21-1)	1.0 %

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance

No

Section 311 hazardous chemical

No

State regulations

US - New Jersey Community RTK (EHS Survey): Listed substance

Diethanolamine (111-42-2)	Substance no. 0686
Ethylene glycol (107-21-1)	Substance no. 0878

US - New Jersey Community RTK (EHS Survey): Reportable threshold

Diethanolamine (111-42-2)	500 LBS
Ethylene glycol (107-21-1)	500 LBS

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-pentanol (6032-29-7)	Listed.
2-Pyrrolidone (616-45-5)	Listed.
Diethanolamine (111-42-2)	Listed.
Ethylene glycol (107-21-1)	Listed.
Glycerol (56-81-5)	Listed.
Propylene Glycol (57-55-6)	Listed.

16. Other Information

HMIS® ratings

Health: 1
Flammability: 0
Physical hazard: 0
Personal protection: B

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

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Revision 1

Replaces sheet dated Apr 4 2009 6:14PM

Disclaimer

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Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds
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